



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q67191

Toshiki KOSHIMAE, et al.

Appln. No.: 10/048,233

Group Art Unit: 2828

Confirmation No.: 4362

Examiner: Dung T. NGUYEN

Filed: January 28, 2002

For: SOLID-STATE LASER DEVICE

RESPONSE UNDER 37 C.F.R. § 1.111

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated May 26, 2004, please consider the following remarks.

Claims 1-6 are all the claims pending in the application. These claims stand rejected under 35 USC 103(a) as being unpatentable over the admitted prior art in view of JP 8-136356. The Examiner alleges that with respect to claims 1 and 5-6, the admitted prior art shows in Figure 11, a laser diode 1, a current source 10, and a detection unit 18. However, the Examiner acknowledges that the prior art does not disclose a voltage measurement unit. Nonetheless, the Examiner states that JP '356 teach this voltage measurement feature and refers to item 4 shown in Figure 1 of JP '356. Applicant respectfully traverses this rejection.

First, as also argued in the March 4, 2004 Amendment (and not addressed by the Examiner), *assuming arguendo* that Figure 11 of the present application (the admitted prior art) actually discloses an abnormality detection unit as alleged by the Examiner, this unit would consist of photodiode 16, light intensity measuring unit 17 and fault detector 18. Independent claim 1 (and 2) recite that the abnormality detection unit detects an abnormality based on output of a voltage measurement unit. In the present invention, a voltage measurement unit measures a voltage at both ends of the laser diode. This measurement is provided to the abnormality detection unit. On the other hand, the device disclosed by Figure 11 of the present application is *not capable* of detection using voltages. Rather, photodiode 16, light intensity measuring unit 17 and fault detector 18 measure excitation light of the laser diode. This is quite different than the abnormality detection unit of the present invention in structure and function.

Further, while JP '356 discloses a voltmeter 4, the purpose of this voltmeter is to measure the electrical potential difference of the ends of a PN Diode 2 (see paragraph [0017]). A PN Diode would be known in the art as a simple semiconductor device, having two terminals and a PN junction. In the JP '356 device, the PN Diode 2 forms part of a temperature detection unit. By measuring the potential difference at the ends of the PN Diode 2, a temperature change can be determined (see, for example, paragraphs [0002] and [0009], and Figures 5-8). Surely this measurement by the voltmeter 4 (at ends of the PN Diode) for temperature detection purposes is quite different than a laser diode or laser device using diodes that includes a voltage measurement unit within itself for detection of abnormalities of the laser. As such, Applicants submit that there is no suggestion in either Figure 11 or JP '356 for combining the two references.

Further, neither reference teaches the “benefit of measuring the voltage of the laser diode” as broadly argued by the Examiner for the motivation.

Since the Examiner has pointed to no teaching or suggestion in the prior art that would have motivated one of ordinary skill to modify the teachings of Figure 11, Applicant submits that the Examiner's obviousness reasoning to be merely a hindsight reconstruction. Hindsight reconstruction, however, has repeatedly been held to be improper and ineffective in supporting an argument of prima facie obviousness. *See, e.g., In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992); *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990); *In re Laskowski*, 10 USPQ2d 1397 (Fed. Cir. 1989); *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988).

Dependent claims 3-6 also include features relating to voltage measurement of the diode that is neither taught or suggested by the combination of the Figure 11 device and JP ‘356 for the reasons discussed above. Accordingly, these claims are allowable based on their dependency on claims 1 and 2, as applicable, as well as their own “voltage measurement” features.

As such, Applicants submit that the claims are allowable and kindly request that the Examiner pass the application to issue as quickly as possible.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/048,233

Atty. Docket No. Q67191

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Ronald Kimble
Registration No. 44,186

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: August 24, 2004